Interoffice Memorandum
September 9, 2002

To: Donald Van Buren
From: Jane Lundquist JHL Via: Brian Bateman

Subject: Revised Risk Screen for Xoma, Plant # 14263, A# 5034, Standby Emergency Generator Diesel Engine

---

At your request, a revised risk screening analysis was performed for the operation of a standby emergency generator diesel engine at two exhaust heights. Except for the stack height, the assumptions used in the model are the same as those used for the 31-foot exhaust height scenario in my memo to you dated September 4, 2002. For an exhaust height that is 20 feet above ground level, 9 hours of operation per year, excluding periods when operation is required due to emergency conditions, results in a maximum cancer risk of less than one in a million. For an exhaust height that is 26.5 feet above ground level, 29 hours of operation per year results in a maximum cancer risk of less than one in a million. The results are summarized in the tables below.

| Vertical Exhaust at **20 Feet** Above Ground Level | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Receptor | Hours of Operation per year | Engine Size, kW | DieselPM Emission Factor g/kW hr | Annual Average Emiss. Rate (g/s) | X/Q ($\mu g/m^3$) / (g/s) | exposure adjustment factor | unit risk $(\mu g/m^3)^{-1}$ | Cancer risk in a million |
| Non-residential | 9 | 123 | 0.276 | 9.7 E-6 | 504 | 0.66 | 3.0 E-04 | 1 |
| Residential | 9 | 123 | 0.276 | 9.7 E-6 | 39.5 | 1 | 3.0 E-04 | 0.1 |
| Emery Middle School | 9 | 123 | 0.276 | 9.7 E-6 | 9.87 | 1 | 3.0 E-04 | 0.03 |

| Vertical Exhaust at **26.5** Feet Above Ground Level | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Receptor | Hours of Operation per year | Engine Size, kW | DieselPM Emission Factor, g/kW hr | Annual Average Emiss. Rate (g/s) | X/Q ($\mu g/m^3$) / (g/s) | exposure adjustment factor | unit risk $(\mu g/m^3)^{-1}$ | Cancer risk in a million |
| Non-residential | 29 | 123 | 0.276 | 3.1 E-5 | 158 | 0.66 | 3.0 E-04 | 1 |
| Residential | 29 | 123 | 0.276 | 3.1 E-5 | 36.7 | 1 | 3.0 E-04 | 0.3 |
| Emery Middle School | 29 | 123 | 0.276 | 3.1 E-5 | 9.2 | 1 | 3.0 E-04 | 0.09 |